

## Pressure — Temperature

Temperature Range: 33°F – 110°F (5°C – 43°C)  
Maximum Working Pressure: 175psi (12.06 bar)

## Capacity

Flow curves as tested by Underwriters Laboratory per UL 1469, 1996. \* Rated flow \*\*UL Tested

## Standards

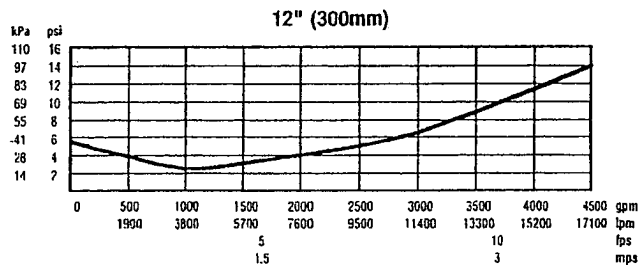
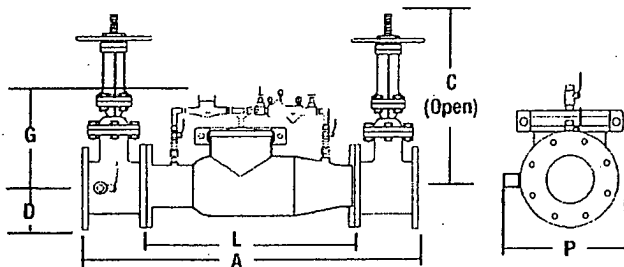
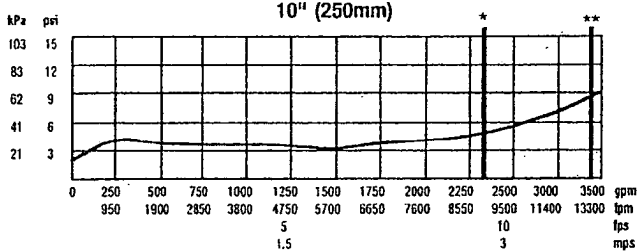
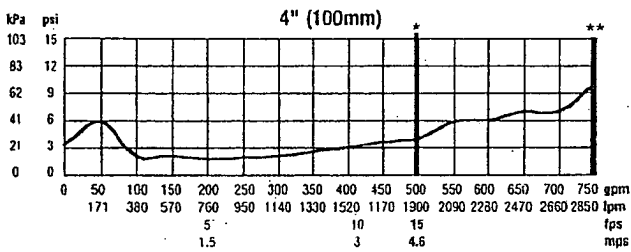
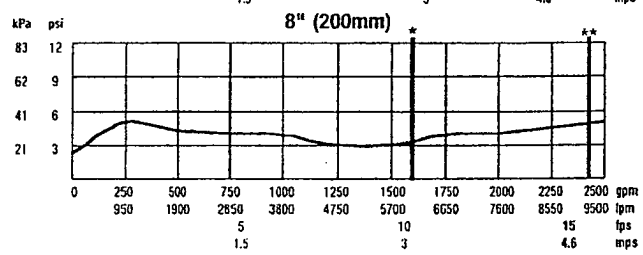
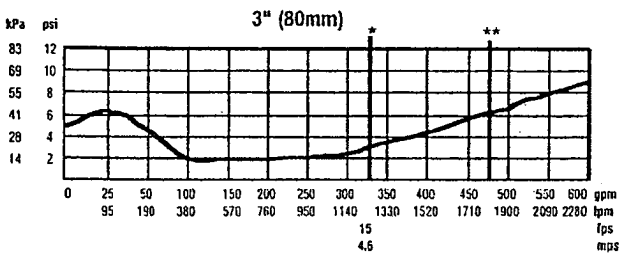
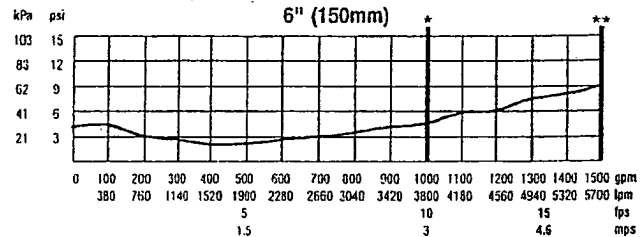
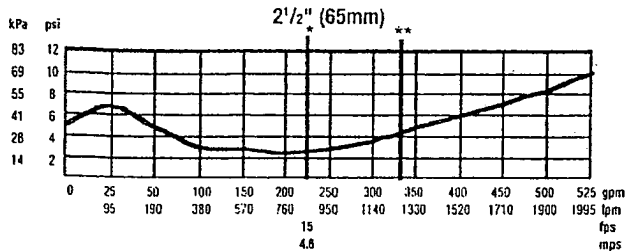
AWWA C510-92, UL 1469

## Approvals

For 12" approvals consult factory.



1048 (sizes 2 1/2" – 10", (OSY Only)



SIZE (DN)				DIMENSIONS								NET WEIGHT				NET WEIGHT	
		A		C (OSY)		D		G		L		P		w/Gates		w/o Gates	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb.	kg.	lb.	kg.
2½	65	37	965	16⅞	416	3½	89	10	250	22	559	12½	318	155	70	68	31
3	80	38	965	18⅞	479	3¾	95	10	250	22	559	13	330	230	104	70	32
4	100	40	1016	22¾	578	4½	114	10	250	22	559	14½	368	240	109	73	33
6	150	48½	1232	30⅞	765	5½	140	15	381	27½	699	15½	394	390	177	120	54
8	200	52½	1334	37¾	959	6¾	171	15	381	29½	749	18½	464	572	259	180	82
10	250	55½	1410	45¾	1162	8	200	15	381	29½	749	19½	495	774	351	190	86
12	300	57½	1461	53⅞	1349	9½	241	15	381	29½	749	21	533	1044	474	220	100



A Division of Watts Regulator Company

**IMPORTANT: Inquire with governing authorities for local installation requirements.**

www.amesfirewater.com

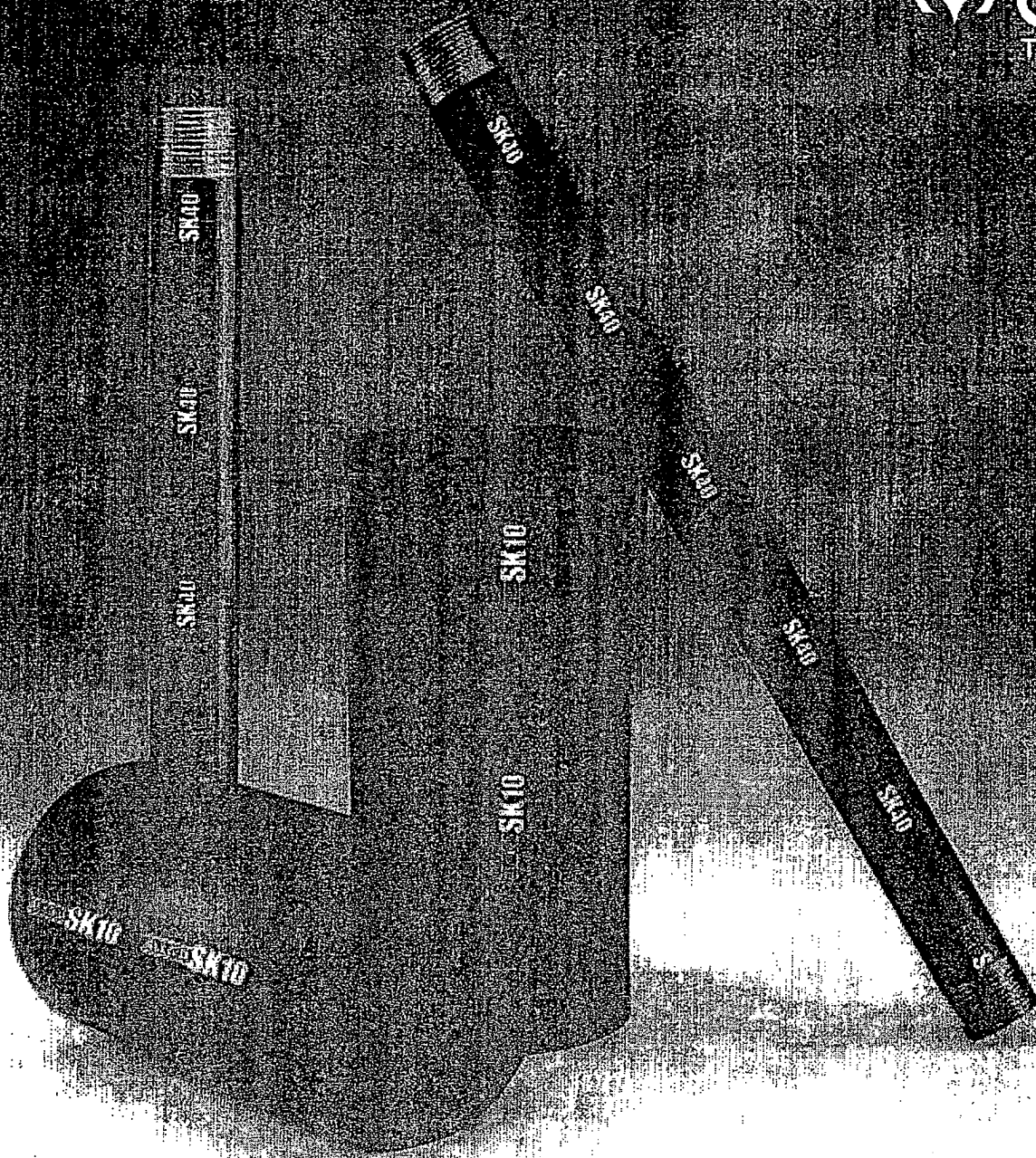


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ES-A-3000SS 0513

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001358



**SCHEDULE-10/40**



# Schedule-10®/Schedule-40®

## Fully Listed and FM Approved Sprinkler Pipe

When you specify Schedule-10/Schedule-40 sprinkler pipe you get a UL listed and FM approved product. Although these products do not require separate approvals, Schedule-10/Schedule-40 gives you the extra quality assurance you demand. Our Sch-10 (1¼"– 8") pipe and Sch-40 (1"– 2½") pipe have passed the same thorough lab testing as our other listed pipe products, and receive periodic mill inspections from both UL and FM agents to ensure consistent quality.

### Galvanized Pipe

Schedule-10/Schedule-40 product can be "hot-dip" galvanized to meet FM requirements for dry systems in accordance with the zinc coating specifications of ASTM A-123.

### Superior Coating

Our advanced formula mill coating offers a clean, durable surface. It is also paint-ready for custom color applications without special preparation.

The internal surface of all black Allied Tube & Conduit Fire Sprinkler pipe products up to 4.5000" in diameter is coated with our new Antibacterial Formula, "ABF". In scientific laboratory test, ABS proved to have superior resistance to microbial colonization of pipe walls, thereby delaying or possibly preventing the onset of Microbiologically Influenced corrosion (MIC) when the First Sprinkler System is first installed.

### American Made

Meets "Buy American" requirement and is available through distributors in the USA, Canada and Mexico.

### Specifications & Approvals

Schedule-10/Schedule-40 pipe are in compliance with the following:

ASTM A-135, and NFPA 13. Both pipe products have a working pressure rating of 300 psi maximum and also meet the stringent requirement for the following tests:

- Welded Outlets
- Hydrostatic Pressure
- Side Wall Rupture
- Vibration Test

### Sch-40 Specifications

NPS In; mm	Nominal I.D. In; mm	WL. Lbs/Ft; Kg/m	WL. (H2O Filled) Lbs/Ft; Kg/m	Pcs/ Lift	Wt/Lft (21') Lbs; Kg	Wt/Lft (24') Lbs; Kg	Wt/Lft (25') Lbs; Kg
1"	1.049	1.680	2.05	70	2,470	2,822	2,940
25	26.6	2.5	3.05	70	1,120	1,280	1,334
1½"	1.380	2.270	2.93	51	2,431	2,778	2,894
32	35.1	4.36	4.36	51	1,103	1,260	1,313
1½"	1.610	2.720	3.61	44	2,513	2,872	2,992
40	40.9	4.0	5.37	44	1,140	1,303	1,357
2"	2.067	3.650	5.13	30	2,300	2,628	2,738
50	52.5	5.4	7.63	30	1,043	1,192	1,242
2½"	2.469	5.790	7.86	19	2,310	2,640	2,750
65	62.7	8.6	11.73	19	1,048	1,197	1,247

### Sch-10 Specifications

NPS In; mm	Nominal I.D. In; mm	WL. Lbs/Ft; Kg/m	WL. (H2O Filled) Lbs/Ft; Kg/m	Pcs/ Lift	Wt/Lft (21') Lbs; Kg	Wt/Lft (24') Lbs; Kg	Wt/Lft (25') Lbs; Kg
1"	1.097	1.400	1.81	91	2,675	3,053	3,185
25	27.9	2.1	2.70	91	1,213	1,385	1,445
1½"	1.442	1.810	2.52	61	2,319	2,664	2,760
32	36.6	2.7	3.75	61	1,052	1,208	1,252
1½"	1.682	2.080	3.04	61	2,664	3,045	3,172
40	42.7	3.1	4.52	61	1,208	1,381	1,439
2"	2.157	2.640	4.22	37	2,051	2,344	2,442
50	54.8	3.9	6.28	37	930	1,063	1,108
2½"	2.635	3.530	5.89	30	2,224	2,542	2,648
65	66.9	5.3	8.77	30	1,009	1,153	1,201
3"	3.260	4.330	7.94	19	1,728	1,975	2,057
80	82.8	6.4	11.82	19	784	896	933
4"	4.260	5.610	11.78	19	2,238	2,558	2,665
90	108.2	8.3	17.53	19	1,015	1,160	1,209
5"	5.295	7.77	17.33	10	1,632	1,865	1,943
125	134.5	11.56	25.80	10	740	846	881
6"	6.357	9.290	23.03	10	1,951	2,230	2,322
150	161.5	13.8	34.27	10	885	1,012	1,053
8"	8.249	16.490	40.15	7	2,424	2,770	2,885
200	209.5	24.5	59.75	7	1,100	1,256	1,309



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**DYNA THREAD**

001361



# Dyna-Thread®

## Full Line Sch-40 Replacement

*Dyna-Thread® offers the life expectancy of Sch-40 with superior hydraulics and greater value.*

Dyna-Thread sprinkler pipe represents an engineering advancement for the sprinkler pipe industry. It combines the safety and longevity of traditional Sch-40 pipe with quality and superior hydraulic advantages.

### Comparison to Schedule 40

- Dyna-Thread's inside diameter is up to 3.6% larger than Sch-40 giving it superior hydraulics. And, when used in combination with Dyna-Flow pipe, down sizing often occurs.
- Dyna-Thread is fully listed and approved by UL, ULC, and FM for fire sprinkler applications.
- The life expectancy of Dyna-Thread and Sch-40 are equal based on the calculated wall thicknesses per UL.
- The consistent quality of steel used to make Dyna-Thread facilitates smooth threading and lower maintenance costs.
- The exterior of Dyna-Thread is protected by a clean, durable mill coating for extended shelf life and easy paint application.

- With its increased strength and lighter weight, Dyna-Thread reduces installation fatigue and is ideal for retro-fit applications.

Corrosion Resistance Ratio (CRR) is a UL (Underwriters Laboratory) term for the estimated life expectancy of a pipe joint. This is based on the calculated wall thickness at the base of the first exposed thread, assumed to be the weakest point of the pipe length. Dyna-Thread and Sch-40 have the same calculated wall thicknesses at this point and are both assigned the same CRR of 1.00.

The internal surface of all black Allied Tube & Conduit Fire Sprinkler pipe products up to 4.5000" in diameter is coated with our new Antibacterial Formula, "ABF". In scientific laboratory test, ABS proved to have superior resistance to microbial colonization of pipe walls, thereby delaying or possibly preventing the onset of Microbiologically Influenced corrosion (MIC) when the First Sprinkler System is first installed.



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### Comparison to L.W.T. Pipes

- More wall thickness at the thread (CRR=1.00) gives Dyna-Thread better life expectancy than lightwall threadable pipe joints.
- Unlike lightwall threadable pipe, Dyna-Thread has no thread gauge warning.
- Dyna-Thread is approved for standard hanger spacing (15 ft. O.C.), can be used as earthquake sway bracing, and is safe to use as drops.
- Dyna-Thread is safer to weld on.
- Dyna-Thread is more widely accepted than lightwall threadable where Sch-40 is specified.

### Specifications & Approvals

Super 40/Dyna-Thread pipe is manufactured to meet: ASTM A-135, Grade A and is in compliance with NFPA-13. All sizes of Super 40/Dyna-Thread are rated at 300 psi working pressure. Super 40/Dyna-Thread is UL and ULC Listed for wet, dry deluge and pre-action sprinkler systems and FM Approved for use in wet systems. Super 40/Dyna-Thread can be "hot-dip" galvanized to meet FM requirement for dry systems. Super 40/Dyna-Thread is approved for all threaded couplings and welded outlets and is suitable for all roll-grooved, and plain-end fittings. (See listing information).

### Specifications

NPS In; mm	Nominal I.D. In; mm	Wt. Lbs/Ft; Kg/m	Wt. (H2O Filled) Lbs/Ft; Kg/m	Pcs/ Lift	W/Lift (21') Lbs; Kg	W/Lift (24') Lbs; Kg	W/Lift (25') Lbs; Kg
1"	1.080	1.330	1.75	70	1955	2234	2327
25	27.4	2.0	2.60	70	887	1013	1056
1 1/4"	1.408	1.870	2.54	51	2002	2288	2384
32	35.8	2.8	3.78	51	908	1038	1081
1 1/2"	1.639	2.290	3.22	44	2115	2418	2519
40	41.6	3.4	4.79	44	959	1097	1143
2"	2.104	3.050	4.57	30	1921	2196	2287
50	53.4	4.5	6.80	30	871	996	1037

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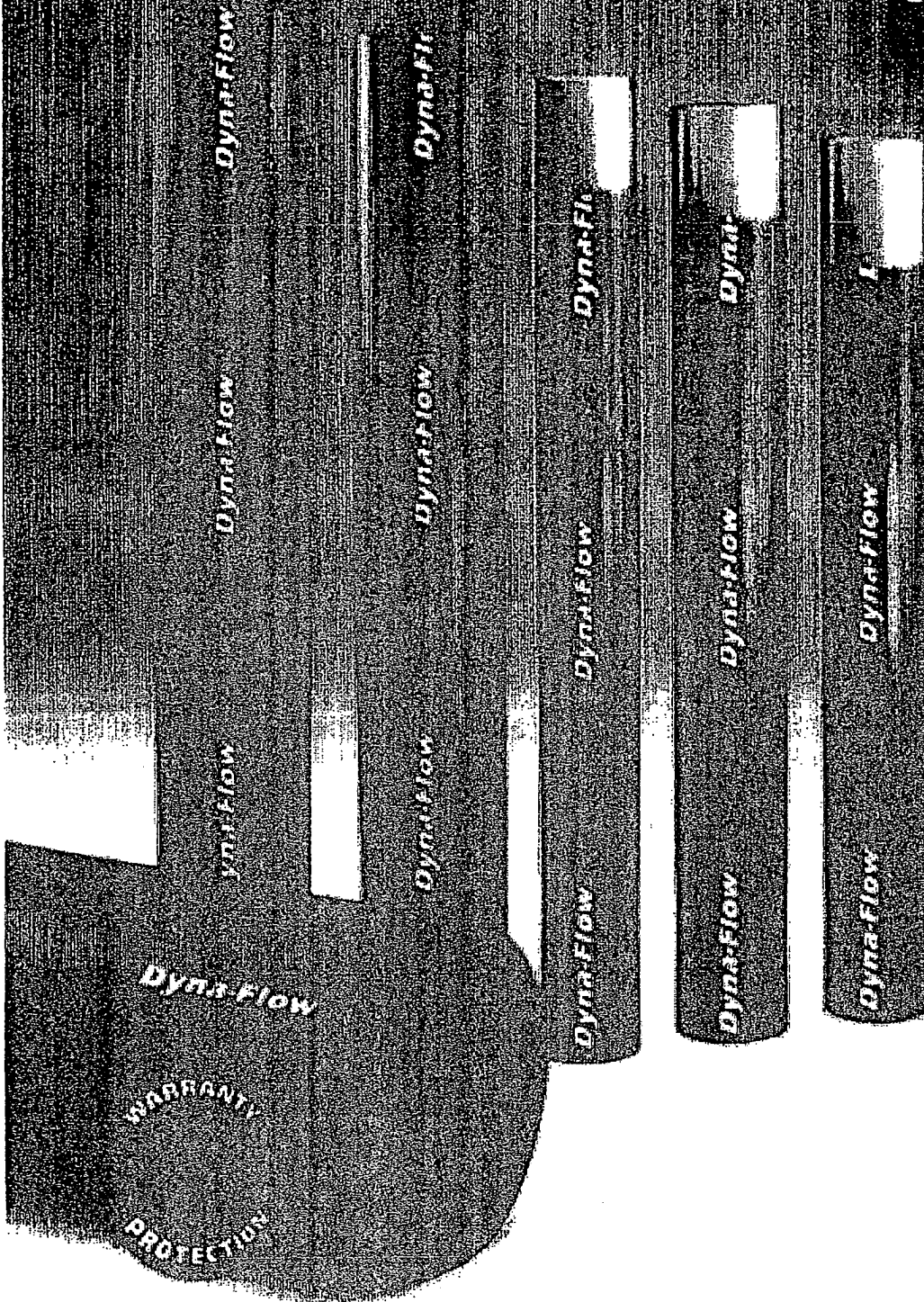
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**DYNA-FLOW**



# Dyna-Flow®

## High Strength Steel Pipe

*The original high-strength lightwall sprinkler pipe with hydraulics superior to Schedule-10.*

Dyna-Flow pipe is the "original" high-strength lightwall sprinkler pipe. Dyna-Flow has outstanding hydraulic capabilities and is recognized as the most popular alternative to Schedule-10 pipe. Lightweight, easy to cut and easy to handle for installation. Dyna-Flow is a valuable addition to any fire protection system.

### Superior Hydraulics

With an inside diameter of up to 11% larger than Schedule-40 and up to 7% larger than Schedule-10, Dyna-Flow pipe hydraulics are exceptional. Larger I.D.s enable Dyna-Flow, and related components, to be down-sized within the system, thus increasing the potential for job cost savings. For complete Hazen-Williams charts, refer to "Dyna-Flow Hydraulic Data Tables."

Specifications							
NPS In; mm	Nominal I.D. In; mm	WL. Lbs/Ft; Kg/m	WL. (H2O Filled) Lbs/Ft; Kg/m	Pcs/ Lift	W/Lift (21") Lbs; Kg	W/Lift (24") Lbs; Kg	W/Lift (25") Lbs; Kg
1"	1.191	0.830	1.31	91	1,586	1,812	1,888
25	30.3	1.2	1.95	91	719	822	856
1 1/4"	1.536	1.059	1.87	61	1,356	1,550	1,615
32	39.0	1.6	2.78	61	615	703	733
1 1/2"	1.728	1.667	2.71	61	2,135	2,440	2,542
40	43.9	2.5	4.03	61	968	1107	1153
2"	2.203	2.104	3.79	37	1,634	1,868	1,946
50	56.0	3.1	5.64	37	741	847	883
2 1/2"	2.703	2.564	5.10	30	1,615	1,846	1,923
65	68.7	3.8	7.59	30	733	837	872
3"	3.314	3.387	7.18	19	1,351	1,544	1,608
80	84.2	5.0	10.69	19	613	700	729
4"	4.310	4.473	10.86	19	1,784	2,039	2,124
90	109.5	6.7	16.16	19	809	925	963

### Coatings & Fabrication

Dyna-Flow products are coated with an environmentally approved and specially formulated modified-acrylic or water-based coating. This durable coating is paintable. The black coating acts as an excellent primer and is resistant to weathering and U.V. degradation from outdoor storage.

Metallurgical properties provide excellent fabrication characteristics for end prep finishes, welding and roll grooving. There is no special process or equipment needed for fabrication and installation.

The internal surface of all black Allied Tube & Conduit Fire Sprinkler pipe products up to 4.5000" in diameter is coated with our new Antibacterial Formula, "ABF". In scientific laboratory test, ABS proved to have superior resistance to microbial colonization of pipe walls, thereby delaying or possibly preventing the onset of Microbiologically Influenced corrosion (MIC) when the First Sprinkler System is first installed.

### Specifications & Approvals

Dyna-Flow/Super Flo pipe is manufactured to meet ASTM A-795 Type E, Grade A and is in compliance with NFPA-13 and NFPA-14. All sizes of Dyna Flow/Super Flo are UL Listed, FM Approved and ULC Listed.



Listed



Approved



Listed

Dyna-Flow/Super Flo is UL/ULC Listed for use with roll grooved, plain-end couplings, and welded joints for wet, dry, preaction and deluge systems. It is FM Approved for roll grooved, plain-end, and welded joints for wet systems. Refer to appropriate documentation for up-to-date listing and approval information. Dyna-Flow/Super Flo is now available "hot-dip" galvanized and has been specifically approved by FM for dry systems uses.

### Additional Benefits

- Lightweight and easy to install, resulting in more efficient use of your freight and labor dollars.
- Provides stability needed to comply with standard hanger spacing (15 ft O.C.) per NFPA.
- Available in Standard lengths for your convenience, or can be ordered in custom lengths upon approval.
- Fast cutting and welding, as well as easy roll grooving and end preparation.
- Available in Factory roll grooved form for quicker shop turnaround.
- Clean, durable mill coating provides longer "shelf life" and acts as an excellent primer for custom paint applications.

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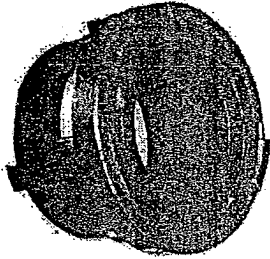
## STORZ CONNECTIONS

### STORZ FIRE DEPT INLET CONNECTIONS

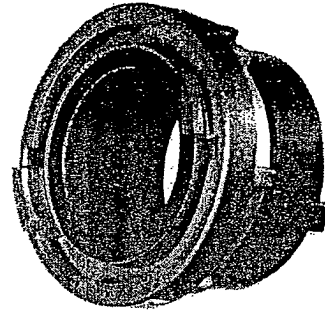
**FUNCTION:** Used as an auxiliary inlet connection to supplement the fire protection water supply. Provides a range from 500/1892 to 1000/3785 GPM/lpm per inlet. A Storz connection provides a means of rapid supply through large diameter hose (LDH).

**REGULARLY FURNISHED:** Hard coated aluminum with Storz on one end and female national pipe thread on the other.

**SPECIFY:** Model number for size

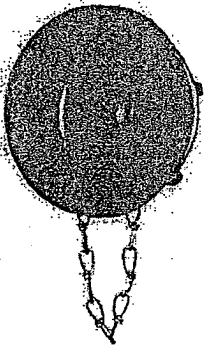


**5795-01**

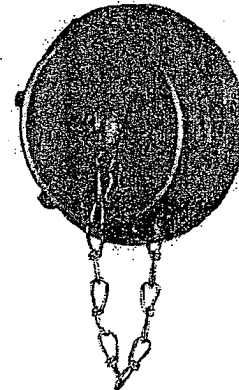


**5795-04**

Model No.	Size
5795-01	4" STORZ X 4" NPT 10.2 cm 10.2 cm
5795-02	5" STORZ X 4" NPT 12.7 cm 10.2 cm
5795-03	6" STORZ X 4" NPT 15.2 cm 10.2 cm
5795-04	4" STORZ X 6" NPT 10.2 cm 15.2 cm
5795-05	5" STORZ X 6" NPT 12.7 cm 15.2 cm
5795-06	6" STORZ X 6" NPT 15.2 cm 15.2 cm



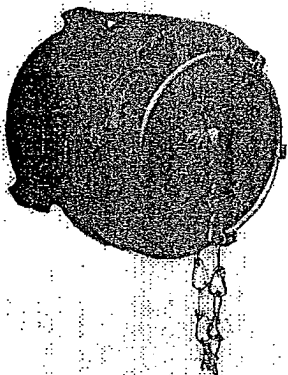
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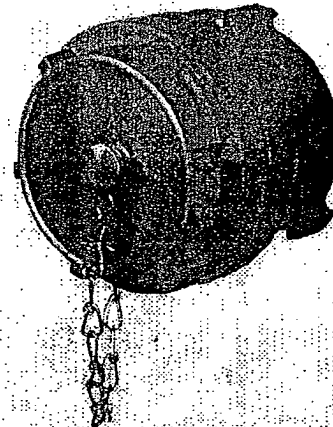
**5799-03**

### STORZ BLIND CAPS WITH CHAINS

Model No.	Size
5799-01	4" STORZ 10.2 cm
5799-02	5" STORZ 12.7 cm
5799-03	6" STORZ 15.2 cm



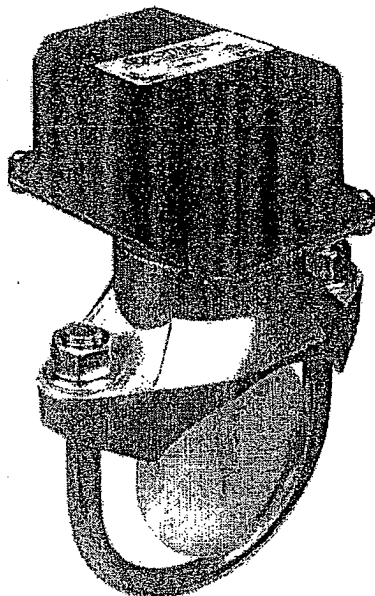
**5795-01 &  
5799-01**



**5795-04 &  
5799-01**

Call for availability of other  
STORZ configurations





U.S. Pat. No. 3921989  
Canadian Pat. No. 1009680  
Other Patents Pending  
Potter Electric, Rd., 1990

## VSR-F VANE TYPE WATERFLOW ALARM SWITCH WITH RETARD

UL, ULC and CSFM Listed, FM and LPCB Approved, NYMEA Accepted, CE Marked

Service Pressure: Up to 450 PSI (31 BAR)

Minimum Flow Rate for Alarm: 10 GPM (38 LPM)

Maximum Surge: 18 FPS (5.5 m/s)

Contact Ratings: Two sets of SPDT (Form C)  
15.0 Amps at 125/250VAC  
2.0 Amps at 30VDC Resistive

Conduit Entrances: Two knockouts provided for 1/2" conduit

### Environmental Specifications:

- Suitable for indoor or outdoor use with factory installed gasket and die-cast housing.
- NEMA 4/IP54 Rated Enclosure - use with appropriate conduit fitting.
- Temperature Range: 40°F/120°F, 4.5°C/49°C
- Non-corrosive sleeve factory installed in saddle.

**Caution:** This device is not intended for applications in explosive environments.

Sizes Available: Steel Pipe schedules 10 thru 40, sizes 2" thru 8"  
BS 1387 pipe 50mm thru 200mm

Note: For copper or plastic pipe use Model VSR-CF.

### Service Use:

Automatic Sprinkler	NFPA-13
One or two family dwelling	NFPA-13D
Residential occupancy up to four stories	NFPA-13R
National Fire Alarm Code	NFPA-72

**Optional:** Cover Tamper Switch Kit, Stock No. 0090018

### GENERAL INFORMATION

The Model VSR-F is a vane type waterflow switch for use on wet sprinkler systems. It is UL Listed and FM Approved for use on steel pipe; schedules 10 through 40, sizes 2" thru 8" (50mm thru 200mm).

LPC approved sizes are 2" thru 8" (50mm thru 200mm).

The unit may also be used as a sectional waterflow detector on large systems.

The unit contains two single pole, double throw, snap action switches and an adjustable, instantly recycling pneumatic retard. The switches are actuated when a flow of 10 gallons per minute (38 LPM) or more occurs downstream of the device. The flow condition must exist for a period of time necessary to overcome the selected retard period.

**ENCLOSURE:** The unit is enclosed in a general purpose, die-cast housing. The cover is held in place with two tamper resistant screws which require a special key for removal. A field installable cover tamper switch is available as an option which may be used to indicate unauthorized removal of the cover. See bulletin no. 5400775 for installation instructions of this switch.

### INSTALLATION: See Fig.2

These devices may be mounted on horizontal or vertical pipe. On horizontal pipe they should be installed on the top side of the pipe where they will be accessible. The units should not be installed within 6" (15cm) of a fitting which changes the direction of the waterflow or within 24" (60 cm) of a valve or drain.

Drain the system and drill a hole in the pipe using a circular saw in a slow speed drill. The 2" (50mm) and 2 1/2" (65mm) devices require a hole with a diameter of 1 1/4" + 1/8" - 1/16" (33mm ±2mm). All other sizes require a hole with a diameter of 2" ±1/8" (50mm ±2mm).

Clean the inside pipe of all growth or other material for a distance equal to the pipe diameter on either side of the hole.

Roll the vane so that it may be inserted into the hole; do not bend or crease it. Insert the vane so that the arrow on the saddle points in the direction of the waterflow. Install the saddle strap and tighten nuts alternately to an eventual 50 ft.-lbs. (68 n-m) of torque (see Fig. 2). The vane must not rub the inside of the pipe or bind in any way.

Specifications subject to change without notice.

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MFG. #5400761 - 7/02

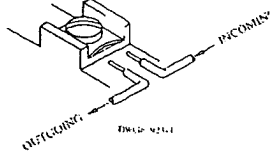
PAGE 1 OF 2

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## VSR-F VANE TYPE WATERFLOW ALARM SWITCH WITH RETARD

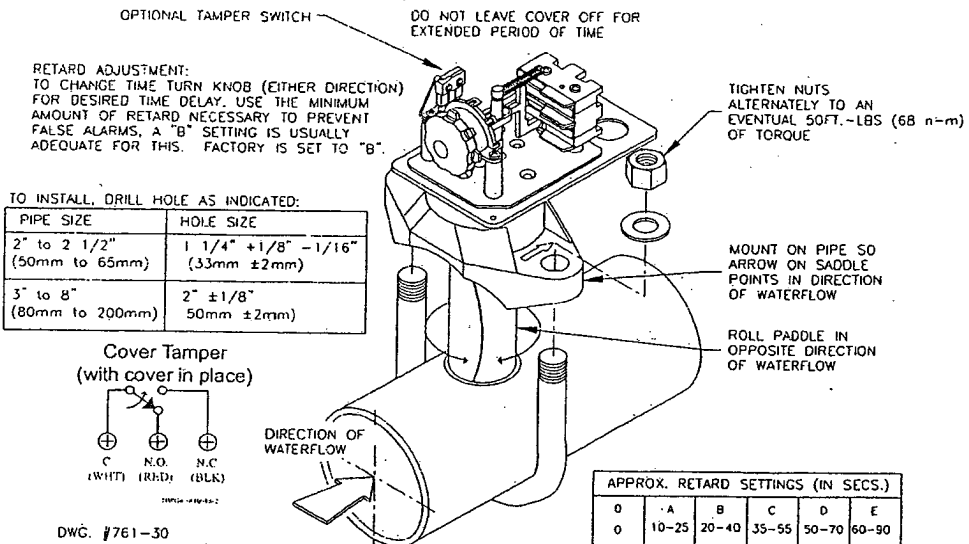
**FIG. 1**  
**SWITCH TERMINAL  
CONNECTIONS  
CLAMPING PLATE  
TERMINAL**



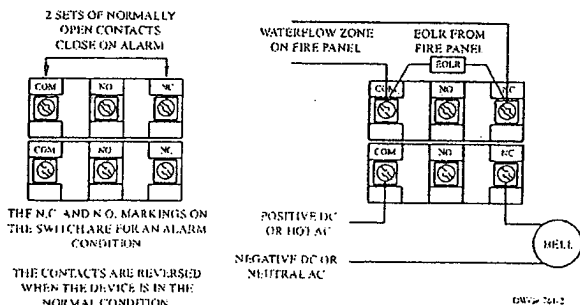
**CAUTION:**

An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision in the event that the wire becomes dislodged from under the terminal.

**FIG. 2**



**FIG. 3 TYPICAL ELECTRICAL CONNECTIONS**

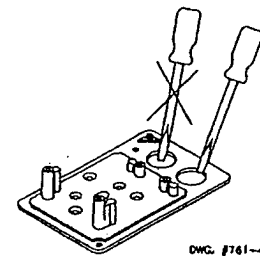


**NOTES:**

1. The Model VSR-F has two switches, one can be used to operate a central station, proprietary or remote signaling unit, while the other contact is used to operate a local audible or visual annunciator.
2. A condition of LPC Approval of this product is that the electrical entry must be sealed to exclude moisture.
3. For supervised circuits see "Switch Terminal Connections" drawing and caution note (Fig. 1).

**FIG. 4**

To remove knockouts: Place screwdriver at edge of knockouts, not in the center.



**APPLICATION WARNING!**

Due to the possibility of unintended discharges caused by pressure surges, trapped air, or short retard times, waterflow switches that are monitoring wet pipe sprinkler systems should not be used as the sole initiating device to discharge AFFF, deluge, or chemical suppression systems.

**TESTING**

The frequency of inspection and testing for the model VSR-F and its associated protective monitoring system should be in accordance with applicable NFPA Codes and Standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently).

If provided, the inspector's test valve, that is usually located at the end of the most remote branch line, should always be used for test purposes. If there are no provisions for testing the operation of the flow detection device on the system, application of the VSR-F is not recommended or advisable.

A minimum flow of 10 gpm (38 Lpm) is required to activate this device.

**IMPORTANT NOTICE:** Please advise the person responsible for testing of the fire protection system that this system must be tested in accordance with the testing instructions.





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Revision 5/24/2001

## Fig. 200 - "Trimline" Adjustable Band Hanger

**Size Range** — 1/2" thru 8" pipe

**Material** — Carbon Steel, Mil. Galvanized to G90 specifications

**Function** — For fire sprinkler and other general piping purposes. Knurled swivel nut design permits hanger adjustment after installation.

**Features** —

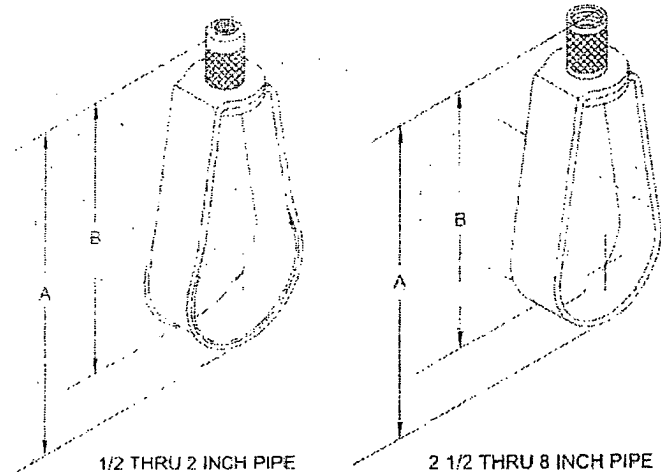
- (1/2" thru 2") Flared edges ease installation for all pipe types and protect CPVC plastic pipe from abrasion. Captured design keeps adjusting nut from separating with hanger. Hanger is easily installed around pipe.
- (2 1/2" thru 8") Spring tension on nut holds it securely in hanger before installation. Adjusting nut is easily removed.

**Approvals** — Underwriters' Laboratories listed (1/2" thru 8") in the USA (UL) and Canada (cUL) for steel and CPVC plastic pipe and Factory Mutual Engineering Approved (3/4" thru 8"). Conforms to Federal Specifications WW-H-171E, Type 10 and Manufacturers Standardization Society SP-69, Type 10.

**Maximum Temperature** — 650°F

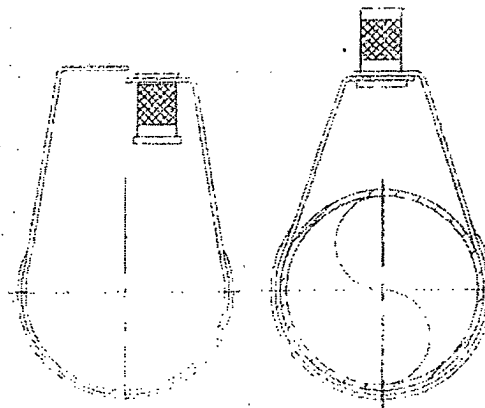
**Finish** — Mil. Galvanized. For Stainless Steel materials, order TOLCO™ Fig. 200WON.

**Order By** — Figure number and pipe size



1/2 THRU 2 INCH PIPE

2 1/2 THRU 8 INCH PIPE



### Dimensions • Weights

Pipe Size	Rod Size		A	B	Max. Rec. Load Lbs.	Approx. Length
Inch	Metric					
1/2	3/8	8mm or 10mm	3 1/4	2 3/4	400	11
3/4	3/8	8mm or 10mm	3 1/4	2 1/2	400	11
1	3/8	8mm or 10mm	3 3/4	2 3/4	400	12
1 1/4	3/8	8mm or 10mm	3 3/4	2 3/4	400	13
1 1/2	3/8	8mm or 10mm	3 3/4	2 3/4	400	14
2	3/8	8mm or 10mm	4 1/2	3	400	15
2 1/2	3/8	10mm	5 3/4	4 1/4	600	27
3	3/8	10mm	5 3/4	4	600	29
3 1/2	3/8	10mm	7 3/4	5 1/4	600	34
4	3/8	10mm	7 3/4	5	1000	35
5	1/2	12mm	9 1/4	6 1/4	1250	66
6	1/2	12mm	10 1/4	6 3/4	1250	73
8	1/2	12mm	13 1/4	8 3/4	1250	136